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ABSTRACT OF THE DISCLOSURE

A transfer scheme for speech and voice band signals and ISDN digital signals which is capable of reducing a transmission bandwidth required for communications of speech, FAX, voice band data and ISDN digital signals that are to be entered from the STM network to the ATM network. and reducing the ATM cell assembling delay time, is disclosed. In the ATM cell multiplexing at the transmitting side, the signal type judgement results for the signals entered from the STM network are notified to the ATM cell multiplexing unit, and these signals are multiplexed into the ATM cell according to the notified signal types so that it becomes possible to multiplex the signals for each input signal type separately, and it becomes possible to treat the STM signals with different network qualities for different signal types as a single ATM connection in which only the input signals with the same quality requirement are multiplexed within the ATM network.

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